

STANDARD FORM NO. 64

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Office Memorandum • UNITED STATES GOVERNMENT

TO : Chief, External Projects Section
 ATTN :
 FROM : Chief, R&D Laboratory

DATE: 1 February 1960

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SUBJECT: Antenna, Description for Nomenclature Assignment

1. A top-loaded vertical antenna system was recently fabricated This antenna was tentatively designated the AN/TH-42. A complete description of the antenna appears in subsequent paragraphs.

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2. The antenna consists of the following major assembly groups:

- (a) Top and Mast Assembly. Consists of a top hat assembly, a loading coil and the mast. The top hat consists of six radials $3/8$ " in diameter and $19\frac{1}{2}$ " long. The loading coil is $14\frac{1}{2}$ " long and wound on a fiber glass cylinder 3" in diameter. The mast consists of 5 sections of aluminum tubing step tapered from $7/8$ " diameter to $2\frac{1}{2}$ " diameter and $10'4$ " long. The sections are threaded for assembly and to telescope into the fiber glass cylinder when collapsed.

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Dimensions:

Collapsed: 4" diameter x $29\frac{7}{8}$ " long
 Extended: 42" diameter x $13'6\frac{1}{4}$ "
 Weight: 9 lb. 1 oz.

- (b) Guys. Consists of three nylon guys approximately 16 feet long attached to hooks which fit into grooves cut into the top mast section. Three stakes are provided to secure the base ends of the guys.

Weight: 1 lb. 8 oz.

- (c) Base Assembly. Consists of a base plate which has a phenolic board top section separated by a fabric phenolic insulator 3" in diameter and $2\frac{3}{8}$ " long from an aluminum bottom section. The bottom section provides reeling devices containing eight phosphor-bronze ground radials 25 feet in length. Two ounce lead weights are provided to keep the extended radials taut.

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Dimensions:

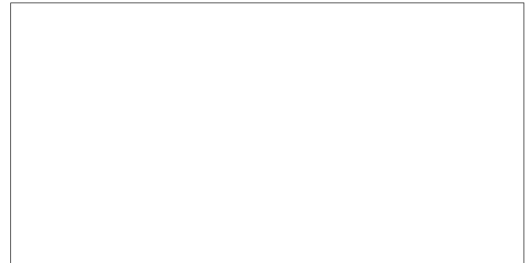
4" wide x 2 7/8" high x 11" long
Weight (inc. lead weights) 3 lbs. 14 oz.

- (d) **Packing Case.** An aluminum case, wrapped in fiber glass is to serve as a combination packing case and burial container.

Dimensions:

4½" x 7½" x 30½" (approximately)
Weight: 7 lbs. (approximately)

- (e) **Complete Antenna Packaged Weight:** 22 lbs. (approx.)



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